

WHAT IS CLAIMED IS:

1. A bicycle shift control device comprising:

a takeup element for pulling and releasing a shift control element;

5 a first finger contact member having a first finger contact surface disposed on a first side of a plane, wherein the first finger contact member moves toward the plane when the takeup element moves in a pulling direction, and wherein the first finger contact member moves away from the plane when the takeup element moves in a releasing direction;

10 a second finger contact member having a second finger contact surface disposed on the first side of the plane, wherein the second finger contact member moves away from the plane when the takeup element moves in the pulling direction, and wherein the second finger contact member moves toward the plane when the takeup element moves in the releasing direction;

15 an interconnecting member that rotates around a rotational axis, wherein the interconnecting member interconnects the first finger contact member and the second finger contact member so that the first finger contact member and the second finger contact member move in a same direction relative to the rotational axis; and

wherein a first straight phantom line perpendicular to the first finger contact surface intersects a second straight phantom line perpendicular to the second finger contact surface.

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2. The device according to claim 1 wherein the first finger contact member is one piece with the second finger contact member.

25 3. The device according to claim 1 wherein the first finger contact surface has a first flat portion, wherein the second finger contact surface has a second flat portion, and wherein the first flat portion is inclined relative to the second flat portion.

30 4. The device according to claim 1 wherein the first straight phantom line extends away from the plane, and wherein the second straight phantom line extends away from the plane.

5. The device according to claim 1 wherein the first finger contact member and the second finger contact member pivot around the rotational axis.

6. The device according to claim 5 wherein the first finger contact surface is disposed on a first side of the rotational axis, and wherein the second finger contact surface is disposed on an opposite second side of the rotational axis.

7. The device according to claim 1 wherein the takeup element is integrally formed with the first finger contact member and the second finger contact member.

8. The device according to claim 7 wherein the takeup element, the first finger contact member and the second finger contact member are one piece.

9. The device according to claim 1 further comprising a detent mechanism for maintaining the takeup element in one of a cable pulled position and a cable released position.

10. The device according to claim 1 wherein the first finger contact surface and the second finger contact surface face away from the plane.

11. The device according to claim 1 wherein the takeup element includes a cable winding surface.

12. The device according to claim 1 further comprising a lever extending away from the plane at a location between the first finger contact surface and the second finger contact surface.

13. The device according to claim 1 wherein a lever ratio of the shift control device is less than 2.0.

14. A bicycle shift control device comprising:  
a takeup element for pulling and releasing a shift control element;  
a first finger contact member having a first finger contact surface disposed on a first

side of a plane, wherein the first finger contact member moves toward the plane when the takeup element moves in a pulling direction, and wherein the first finger contact member moves away from the plane when the takeup element moves in a releasing direction;

5 a second finger contact member having a second finger contact surface disposed on the first side of the plane, wherein the second finger contact member moves away from the plane when the takeup element moves in the pulling direction, and wherein the second finger contact member moves toward the plane when the takeup element moves in the releasing direction;

10 wherein a first straight phantom line perpendicular to the first finger contact surface is substantially parallel to a second straight phantom line perpendicular to the second finger contact surface;

wherein the first finger contact member moves along the first phantom line; and  
wherein the second finger contact member moves along the second phantom line.

15 15. The device according to claim 14 further comprising an interconnecting member coupled between the first finger contact member and the second finger contact member.

20 16. The device according to claim 15 wherein the interconnecting member comprises an interconnecting lever having a first end coupled to the first finger contact member and a second end coupled to the second finger contact member.

17. The device according to claim 16 wherein the interconnecting lever pivots around a pivot axis disposed between the first end and the second end.

25 18. The device according to claim 17 wherein the pivot axis is located closer to one of the first end and the second end than the other one of the first end and the second end.

30 19. The device according to claim 14 further comprising a gear rack retained to one of the first finger contact member and the second finger contact member, and wherein the takeup element includes a plurality of gear teeth meshing with the gear rack.

20. The device according to claim 19 wherein the takeup element rotates in response

to movement of the first finger contact member and the second finger contact member.

21. The device according to claim 14 wherein the first finger contact surface and the second finger contact surface face away from the plane.

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22. The device according to claim 14 wherein the takeup element includes a cable winding surface.

23. A bicycle shift control device comprising:

a takeup element for pulling and releasing a shift control element;

only one finger contact lever for moving the takeup element; and

a detent mechanism for maintaining the takeup element in only two positions, a first of the two positions being a cable pulled position and a second of the two positions being a cable released position.

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24. The device according to claim 23 wherein the finger contact lever rotates around a rotational axis.

25. The device according to claim 24 wherein the finger contact lever extends

20 outwardly from a wire pulling drum that extends around the rotational axis.

26. The device according to claim 24 wherein the finger contact lever and the wire pulling drum is one piece.

25 27. The device according to claim 23 wherein the finger contact lever is rotatably mounted to a mounting member, and wherein the detent mechanism comprises a first detent projection projecting from the takeup element and a second detent projection projecting from the mounting member.

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28. A bicycle shift control device comprising:

a base member having a base member axis;

a rotatable member coupled to the base member coaxially with the base member axis;

wherein the rotatable member rotates relative to the base member around the base

5 member axis;

a cam surface disposed on at least one of the base member and the rotatable member so that the rotatable member moves in a direction of the base member axis when the rotatable member rotates relative to the base member;

10 a finger contact projection extending from the rotatable member in a direction radially outwardly from the base member axis; and

a shift element coupler disposed with the rotatable member so that the shift element coupler moves in the direction of the base member axis when the rotatable member rotates relative to the base member.

15 29. The device according to claim 28 wherein the cam surface comprises a base member cam surface disposed on the base member that slides relative to a rotatable member cam surface disposed on the rotatable member.

20 30. The device according to claim 28 wherein the cam surface comprises a base member cam surface disposed on the base member, wherein the finger contact projection slides relative to the base member cam surface.

25 31. The device according to claim 28 wherein at least one of the base member and the rotatable member includes a coupling projection that extends along the base member axis into an opening in the other one of the base member and the rotatable member.

32. The device according to claim 28 wherein the rotatable member has a cylindrical shape.

30 33. The device according to claim 32 wherein the shift element coupler is disposed on an end surface of the rotatable member.

34. A bicycle shift control device comprising:

a base member;

a rotatable dial coupled to the base member for rotation around a rotational axis;

a finger contact projection extending from the rotatable dial in a direction of the

5 rotational axis; and

a shift element coupler disposed with the rotatable dial.

35. The device according to claim 34 wherein the finger contact projection extends at least partially in a direction perpendicular to the rotational axis.

36. The device according to claim 34 wherein at least one of the dial and the base member includes a coupling projection for coupling the dial to the base member.

37. The device according to claim 36 wherein the coupling projection is disposed on the dial and extends into an opening in the base member.

38. A bicycle shift control device comprising:

a takeup element for pulling and releasing a shift control element;

a first finger contact member having a first finger contact surface disposed on a first side of a plane, wherein the first finger contact member moves toward the plane when the takeup element moves in a pulling direction, and wherein the first finger contact member moves away from the plane when the takeup element moves in a releasing direction;

a second finger contact member having a second finger contact surface disposed on the first side of the plane, wherein the second finger contact member moves away from the plane when the takeup element moves in the pulling direction, and wherein the second finger contact member moves toward the plane when the takeup element moves in the releasing direction;

an interconnecting member that rotates around a rotational axis, wherein the interconnecting member interconnects the first finger contact member and the second finger contact member so that the first finger contact member and the second finger contact member move in a same direction relative to the rotational axis;

wherein the first finger contact surface is disposed on a first side of the rotational axis

and the second finger contact surface is disposed on a second side of the rotational axis; and  
wherein the takeup element is unbiased when the takeup element is disconnected from the shift control element.

5 39. A bicycle shift control device comprising:

a takeup element for pulling and releasing a shift control element;

a first finger contact member having a first finger contact surface disposed on a first side of a plane, wherein the first finger contact member moves toward the plane when the takeup element moves in a pulling direction, and wherein the first finger contact member  
10 moves away from the plane when the takeup element moves in a releasing direction;

a second finger contact member having a second finger contact surface disposed on the first side of the plane, wherein the second finger contact member moves away from the plane when the takeup element moves in the pulling direction, and wherein the second finger contact member moves toward the plane when the takeup element moves in the releasing  
15 direction;

an interconnecting member that rotates around a rotational axis, wherein the interconnecting member interconnects the first finger contact member and the second finger contact member so that the first finger contact member and the second finger contact member move in a same direction relative to the rotational axis;

20 wherein the first finger contact surface is disposed on a first side of the rotational axis and the second finger contact surface is disposed on a second side of the rotational axis; and

a detent mechanism for maintaining the takeup element in only two positions, a first of the two positions being a cable pulled position and a second of the two positions being a cable released position.